

CLAIMS

1. Slurries containing tri- or polyvalent cations used for investment casting and making molds and core coatings.

5 2. Aqueous and alcohol-based slurries according to claim 1, containing a mineral component and a polyanionic binder, where at least one of the continuous phase or the mineral component contains trivalent or polyvalent cations or cations that are converted to trivalent or polyvalent cations during use.

10 3. The slurries according to claim 2, wherein the cationic component is selected from the group consisting of at least one of the metals iron or aluminum.

 4. The slurries according to claim 2 where the polyanionic component contains at least one of the group consisting of colloidal silica or one or more water-soluble organic polymers.

15 5. The slurries according to claim 1 made by incorporating at least 0.01% by weight of mineral or water of an agent that converts said cationic components in the slurry to substances that are incapable of flocculating polyanionic substances.

20 6. The slurries according to claim 2 made by incorporating at least 0.01% by weight of mineral or water of an agent that converts said cationic components in the slurry to substances that are incapable of flocculating polyanionic substances.

7. The slurries according to claim 3 made by incorporating at least 0.01% by weight of mineral or water of an agent that converts said cationic components in the slurry to substances that are incapable of flocculating polyanionic substances.

5 8. The slurries according to claim 4 made by incorporating at least 0.01% by weight of mineral or water of an agent that converts said cationic components in the slurry to substances that are incapable of flocculating polyanionic substances.

10 9. Agents according to claim 5 that contains at least one agent selected from the group consisting of a chelating agent or a reducing agent or a water-soluble phosphate.

10. The slurries according to claim 1 containing minerals or carbon that can be heated in an electromagnetic field selected from the group consisting of microwave, induction or radio frequency radiation.

15 11. The slurries according to claim 2 containing minerals or carbon that can be heated in an electromagnetic field selected from the group consisting of microwave, induction or radio frequency radiation.

20 12. The slurries according to claim 3 containing minerals or carbon that can be heated in an electromagnetic field selected from the group consisting of microwave, induction or radio frequency radiation.

13. The slurries according to claim 4 containing minerals or carbon that can be heated in an electromagnetic field selected from the group consisting of microwave, induction or radio frequency radiation.

5 14. The slurries according to claim 5 containing minerals or carbon that can be heated in an electromagnetic field selected from the group consisting of microwave, induction or radio frequency radiation.

15. The slurries according to claim 6 containing minerals or carbon that can be heated in an electromagnetic field selected from the group consisting of microwave, induction or radio frequency radiation.